

Draft CHESAPEAKE BAY TMDL

**Restoring Pennsylvania's waterways
and Chesapeake Bay**

**Public Meeting
Lancaster, Pennsylvania
October 18, 2010**

www.epa.gov/chesapeakebaytmdl

Today's Agenda

➤ EPA presents draft TMDL

- Rich Batiuk, Chesapeake Bay Program Associate Director for Science
- Bob Koroncai, Chesapeake Bay TMDL Manager

➤ Pennsylvania presents WIP

➤ Question & Answer

➤ More information

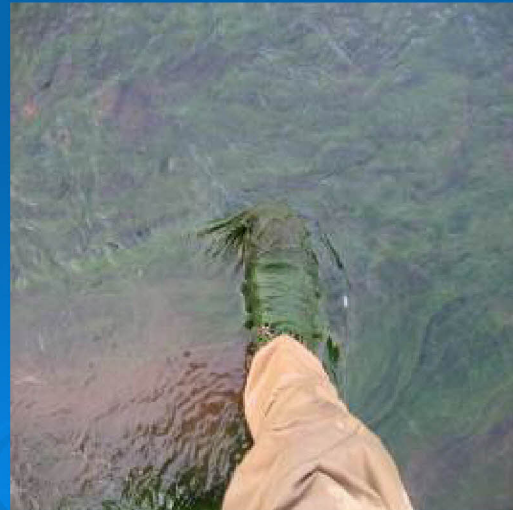
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First...The Bottom Line

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Lack of progress triggered TMDL

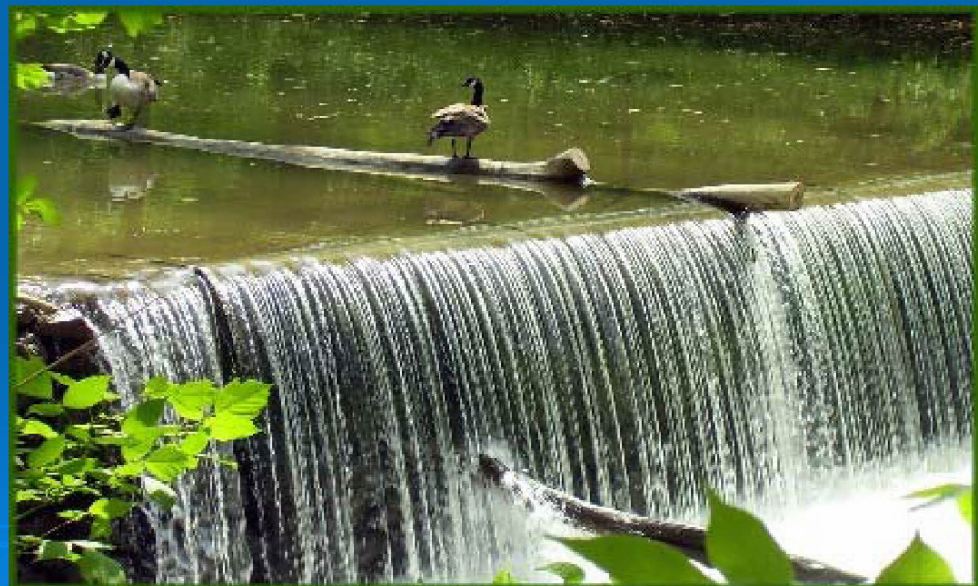


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TMDL is a “pollution diet”

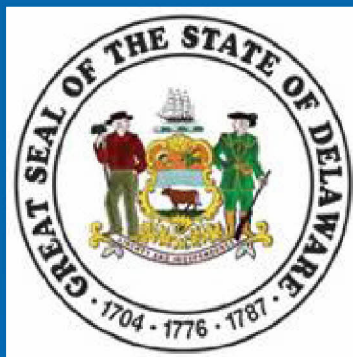


For your streams, creeks and rivers

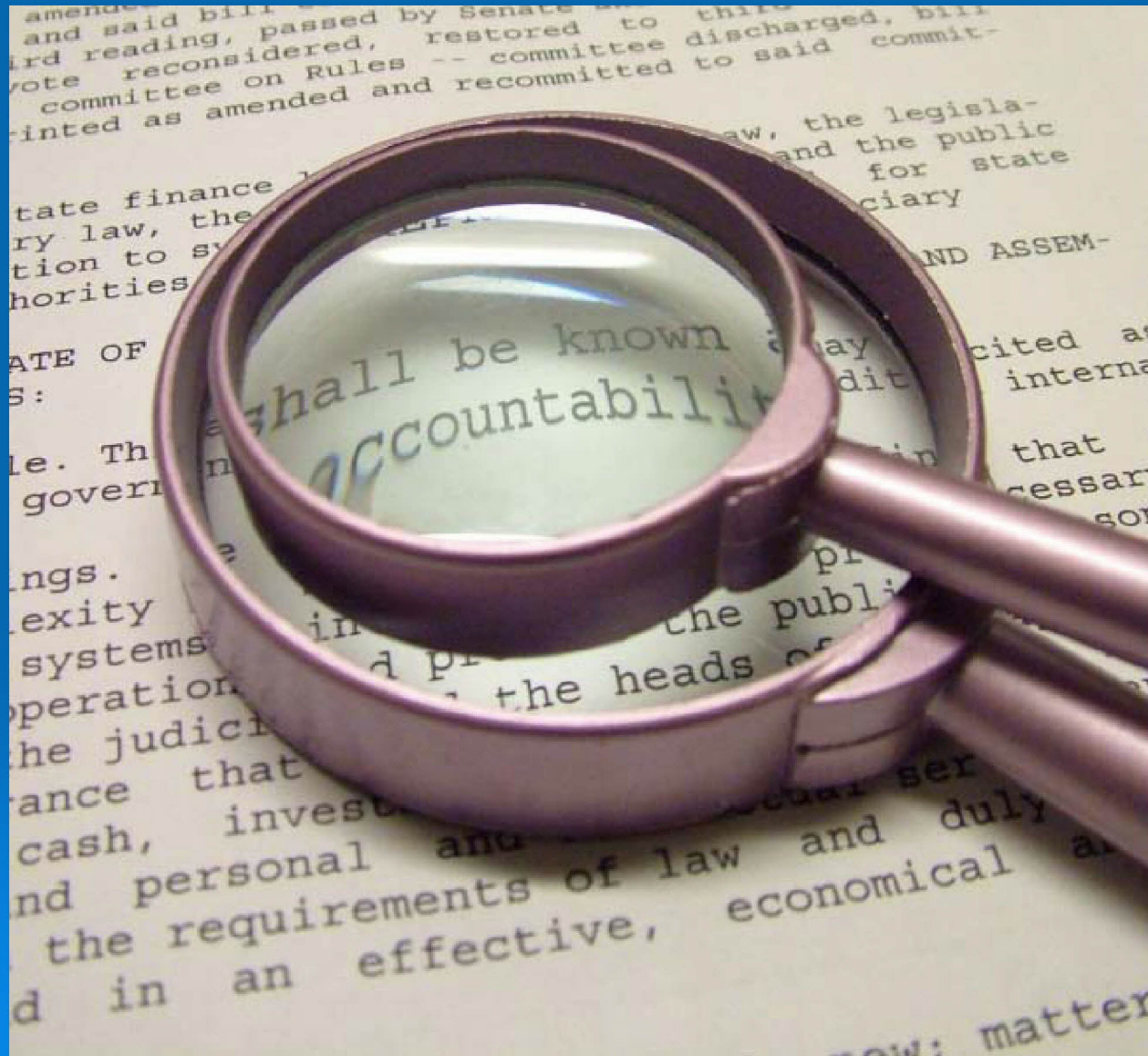


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Blend of **state actions** and **federal measures**



Accountability for results



Task **not easy** but essential



What is a TMDL?

And Why Does it Matter?

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Clean Water Act requires TMDL for waters that don't meet state standards



TMDL = Total Maximum Daily Load
Defines amount of pollution a water
body can handle and be healthy



Bay and tributaries are **polluted**
by nitrogen, phosphorus, sediment

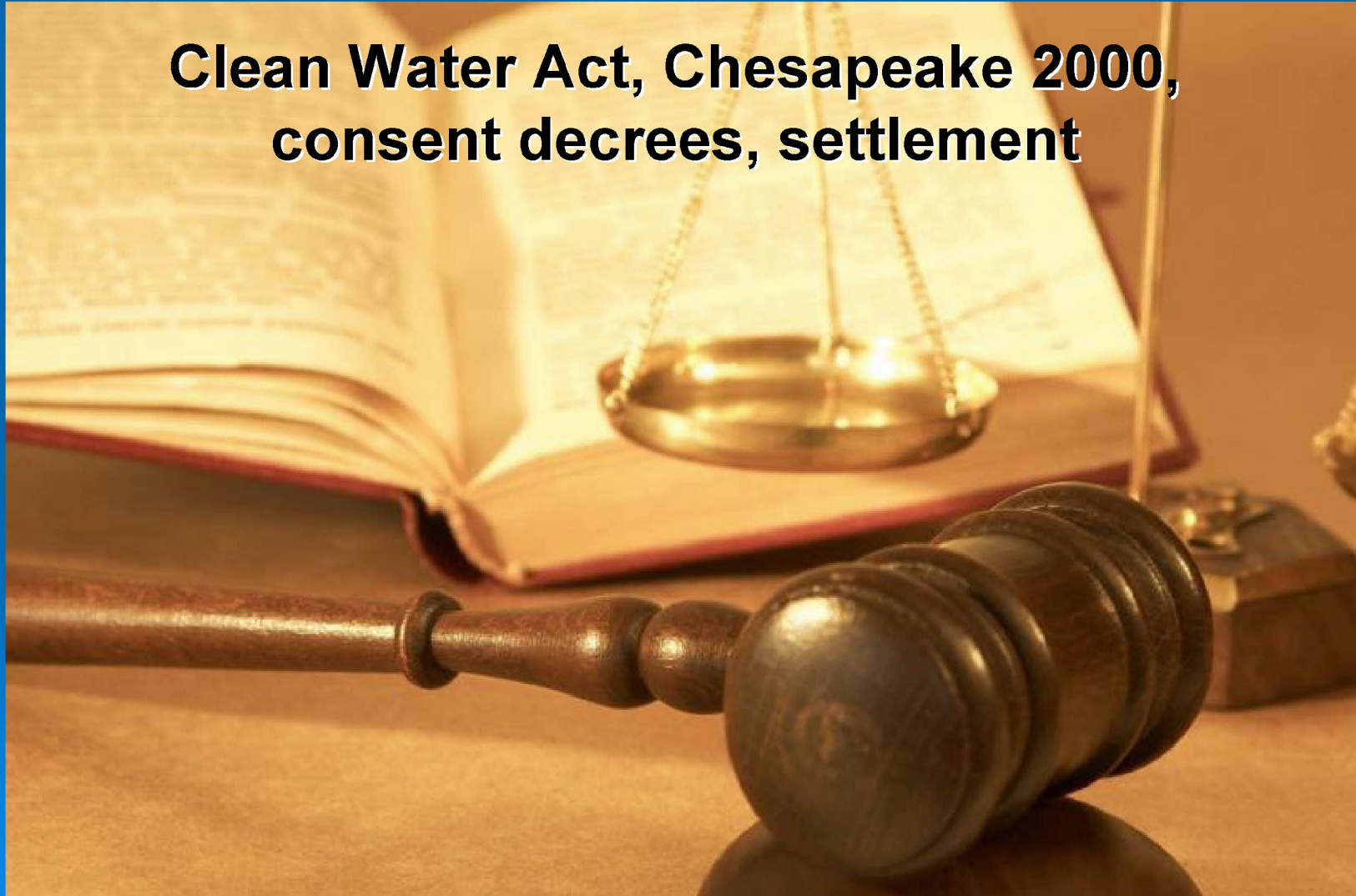


**Rivers, streams, & creeks
contribute to Bay, so included in TMDL**



Legal obligation to get it done

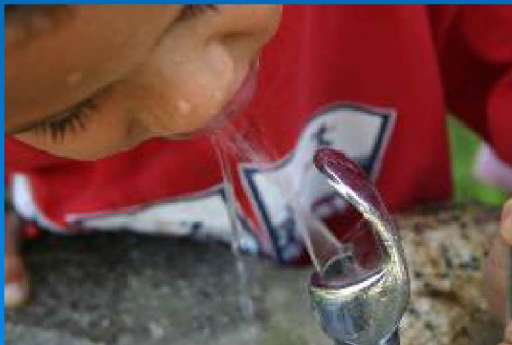
**Clean Water Act, Chesapeake 2000,
consent decrees, settlement**



Part of strategy to meet a Presidential Executive Order



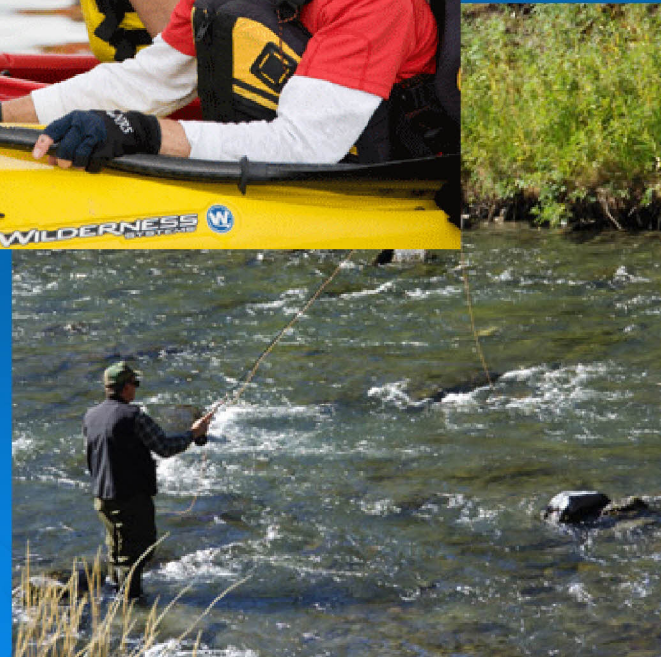
Clean water matters to **your community**



Clean water matters to **your community**



Clean water matters to **your community**



The Economic Impact

- Clean water can increase the value of single-family homes up to 4,000 feet from the water's edge by up to 25 percent.
- Philadelphia estimates that installation of green stormwater infrastructure will raise property values 2 to 5 percent, generating \$390 million over the next 40 years.
- For every \$1 spent on drinking water protection, an average of \$27 is saved in water treatment costs.

The Economic Impact

- Fishing and boating have economic impacts valued at more than \$2 billion per year in Pa.
- Flooding in the Susquehanna basin causes about \$150 million in economic damage each year.
- Between 1993 and 2009 the number of Bay waterman declined from 14,000 to 1,500.

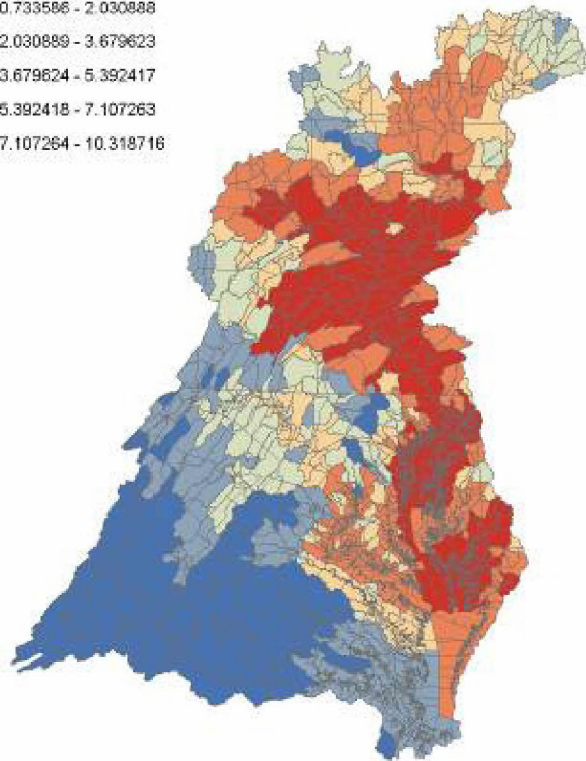
Setting the Pollution Diet

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Impact of Pollution

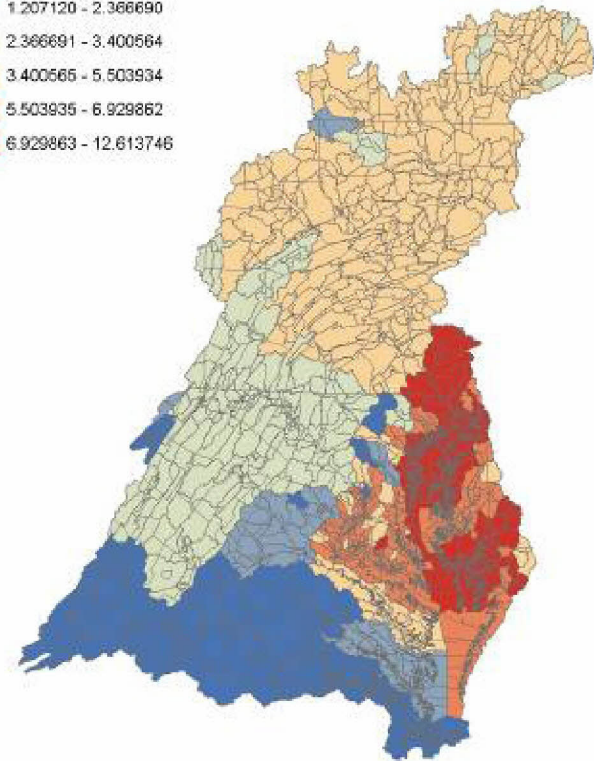
Effectiveness

Nitrogen

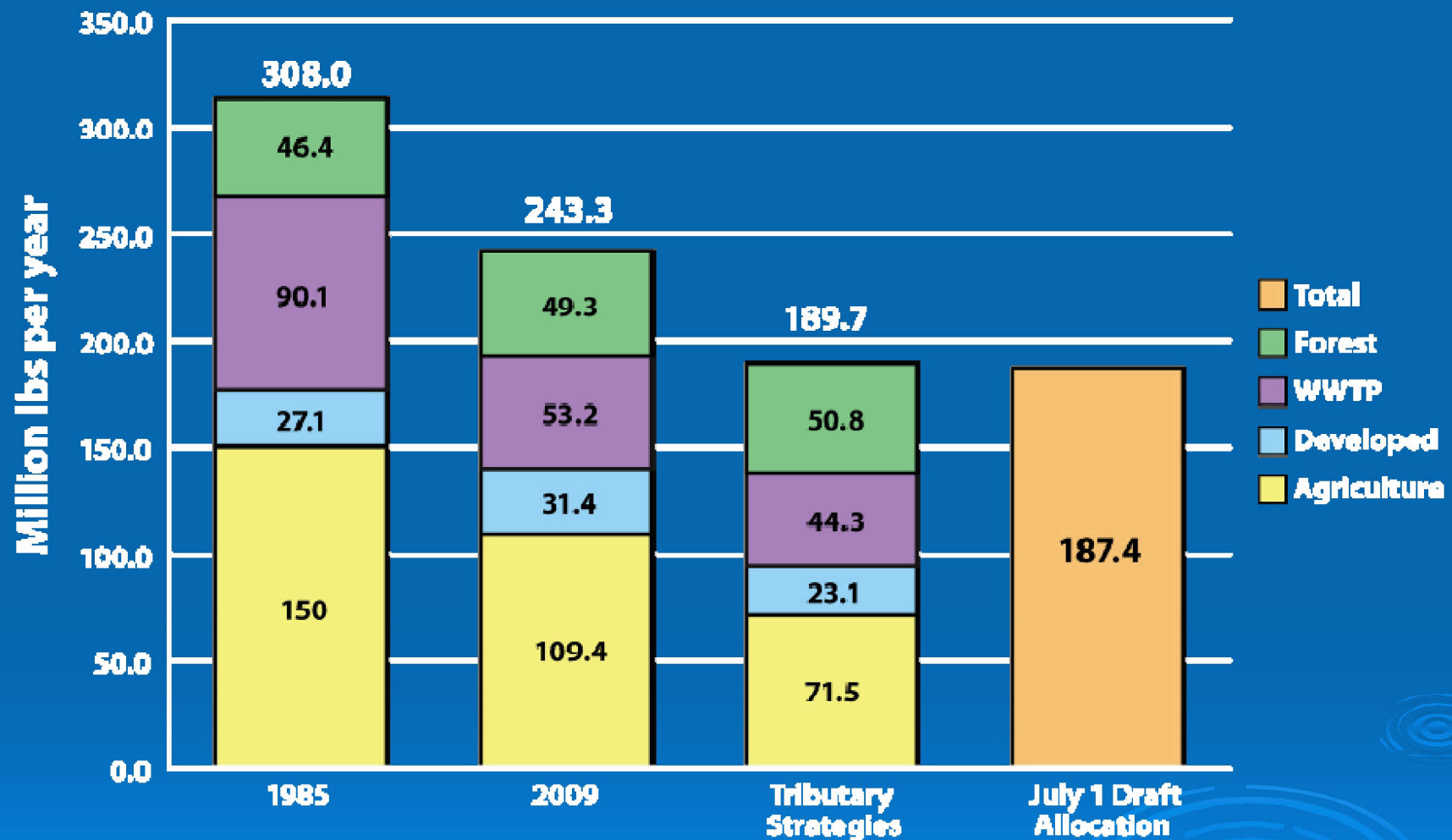


Effectiveness

Phosphorous



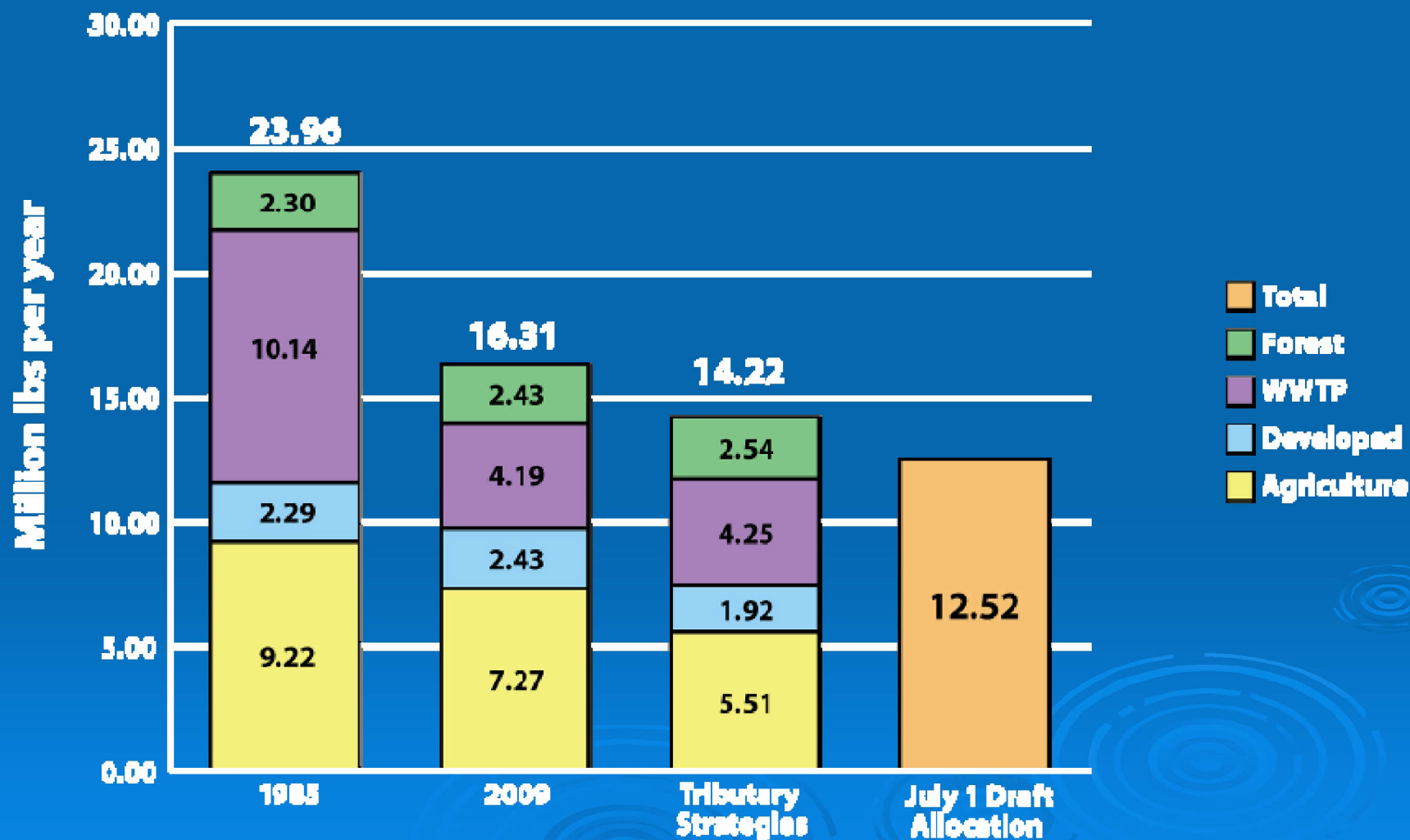
Nitrogen Loads by Sector and Scenario—CBP Watershed Model P5.3



Draft allocation for atmospheric deposition is 15.7 million pounds, which will be achieved by federal air regulations through 2020.

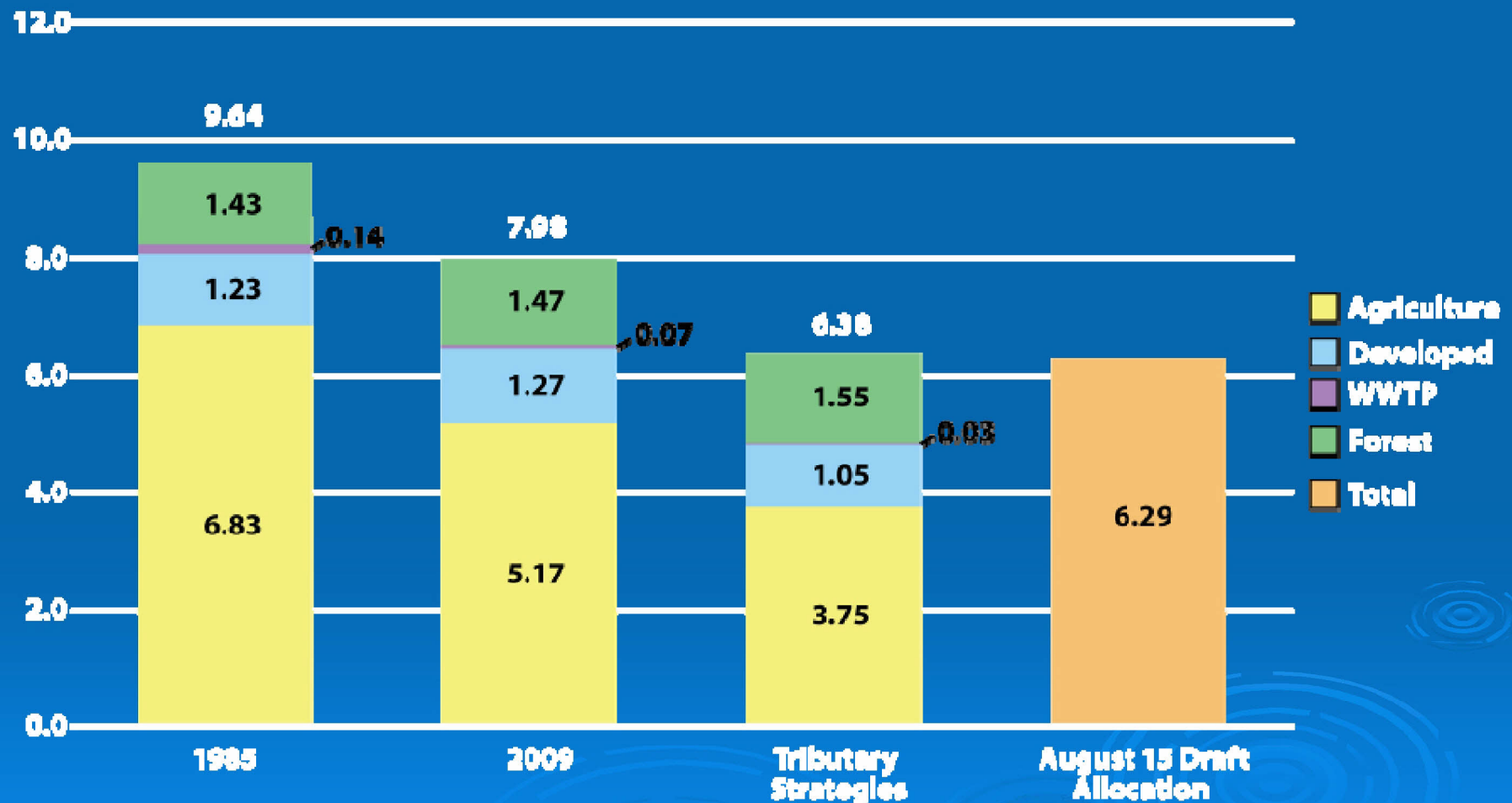
Setting the Diet

Phosphorus Loads by Sector and Scenario—CBP Watershed Model P5.3

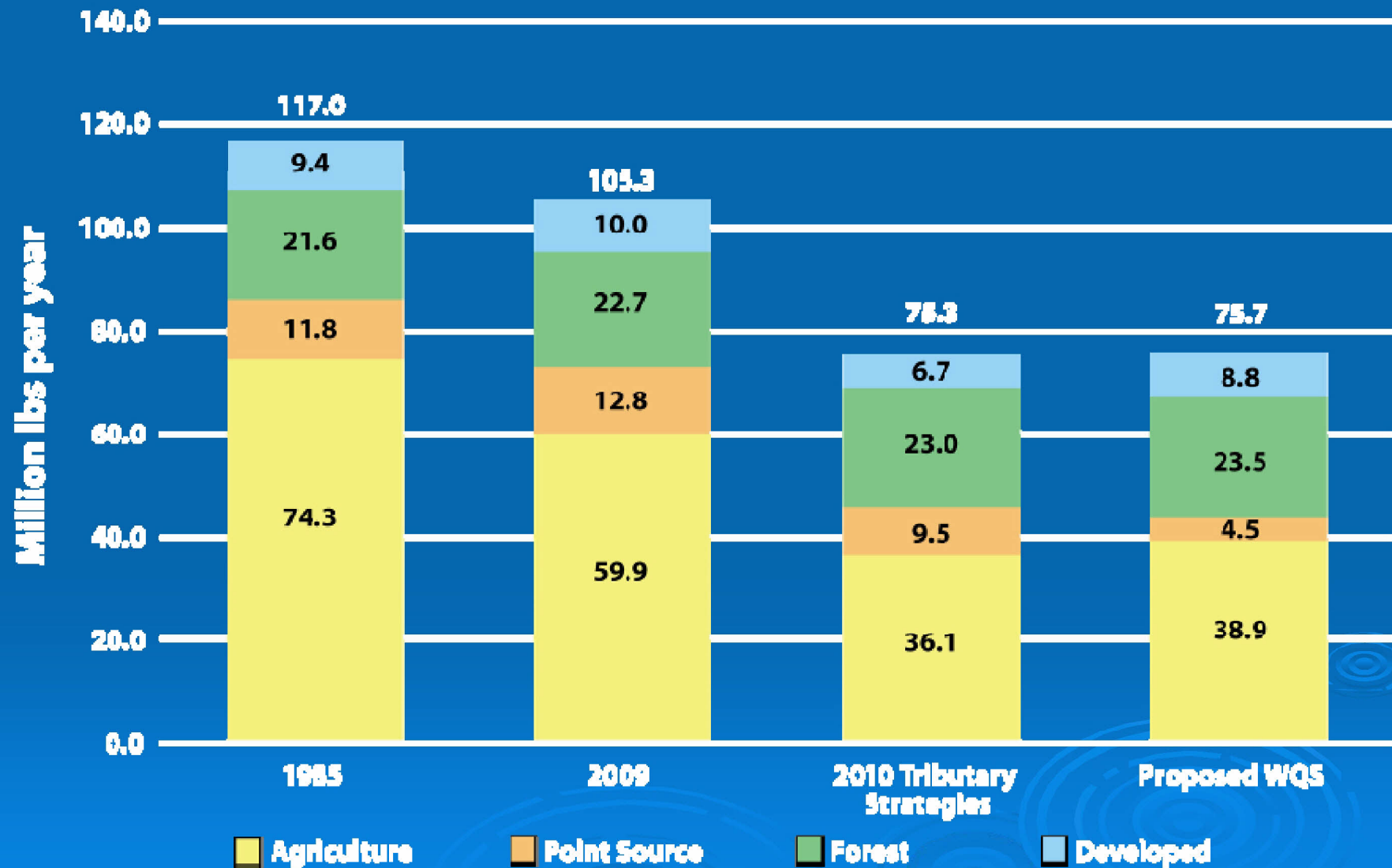


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Model Simulated Sediment Loads by Scenario Compared with the Draft Sediment Allocations (billions of pounds per year as TSS)



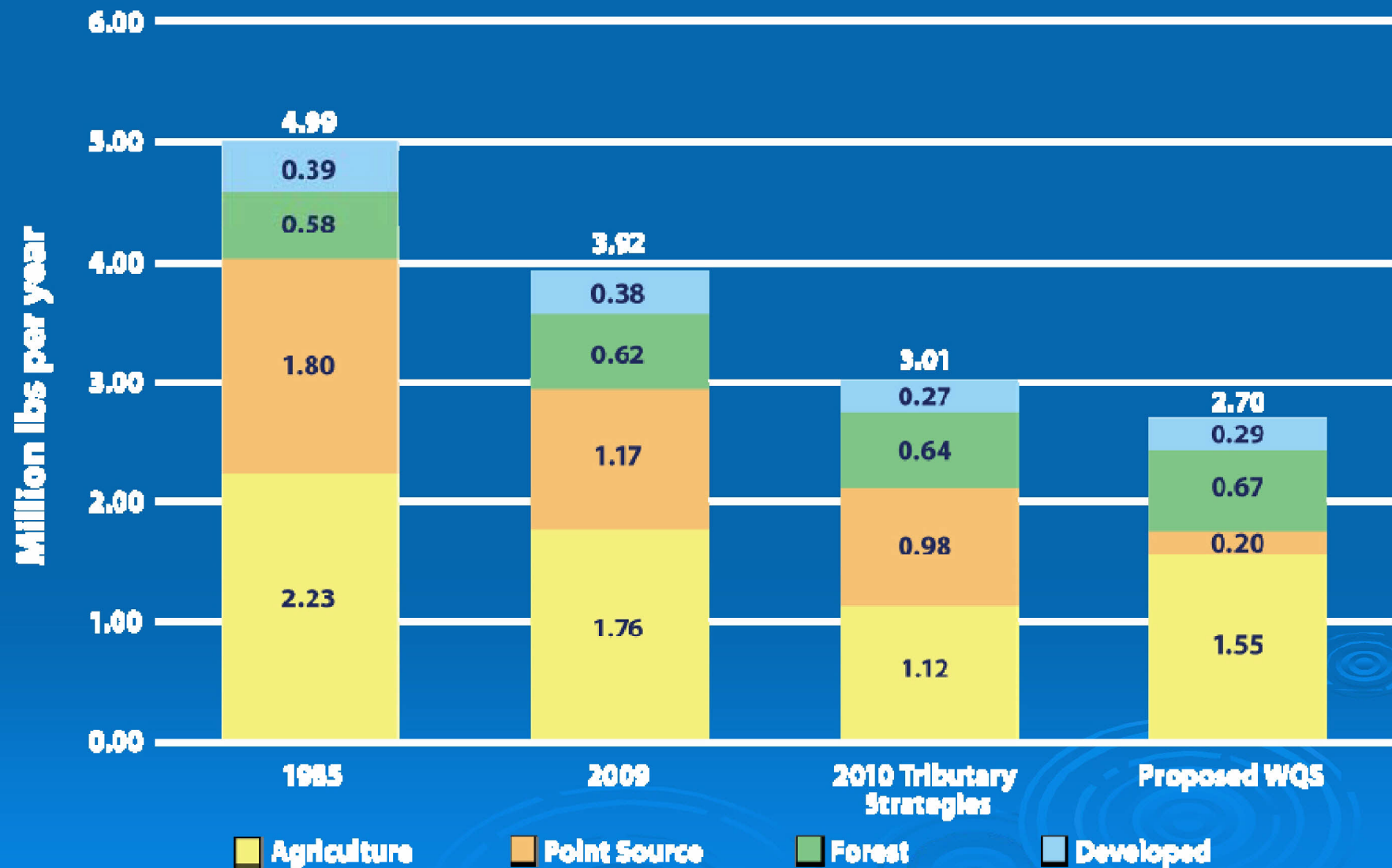
PA Nitrogen Loads by Sector and Scenario—CBP Watershed Model P5.3



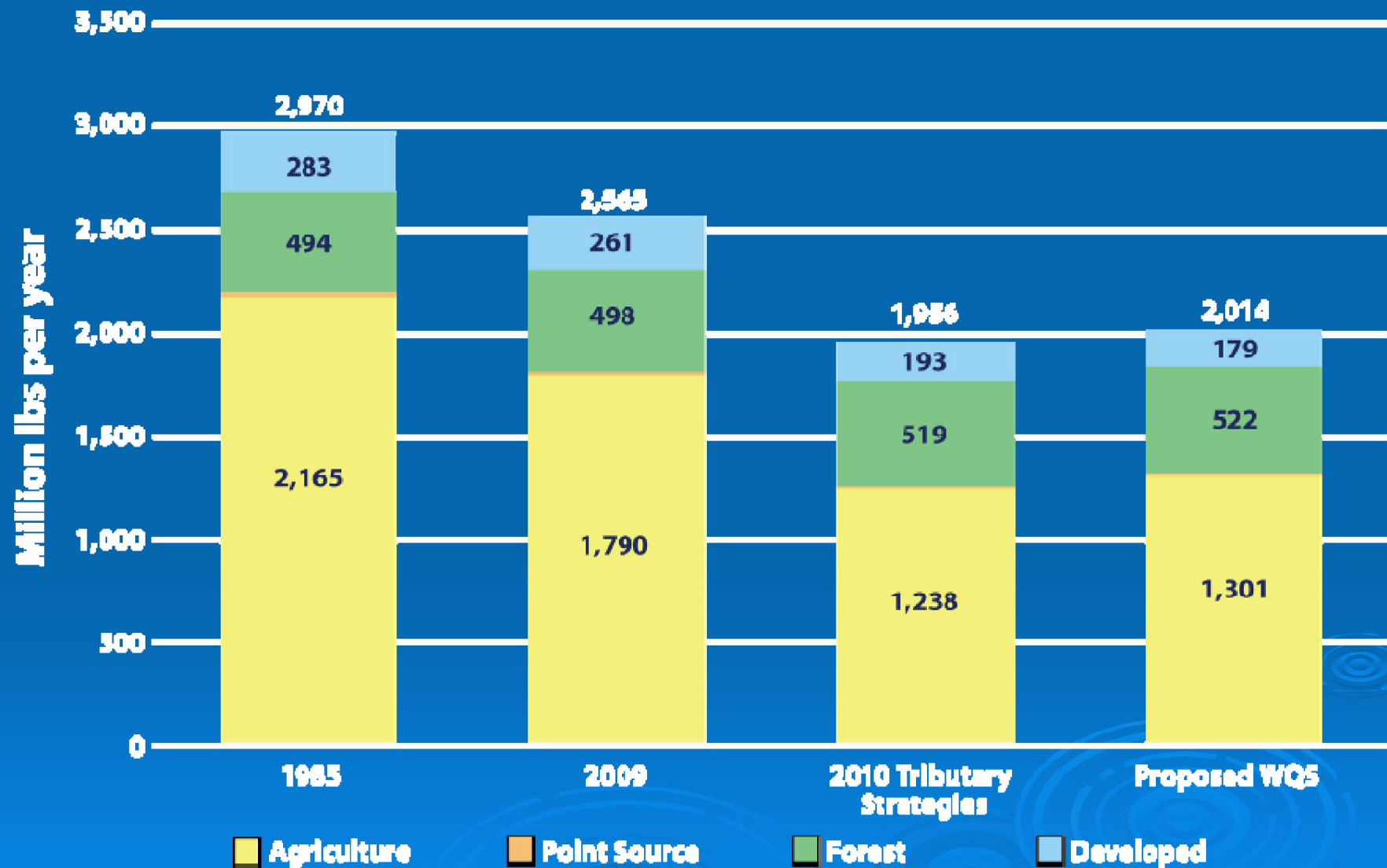
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PA Phosphorus Loads by Sector and Scenario—CBP Watershed Model P5.3



PA Sediment Loads by Sector and Scenario—CBP Watershed Model P5.3



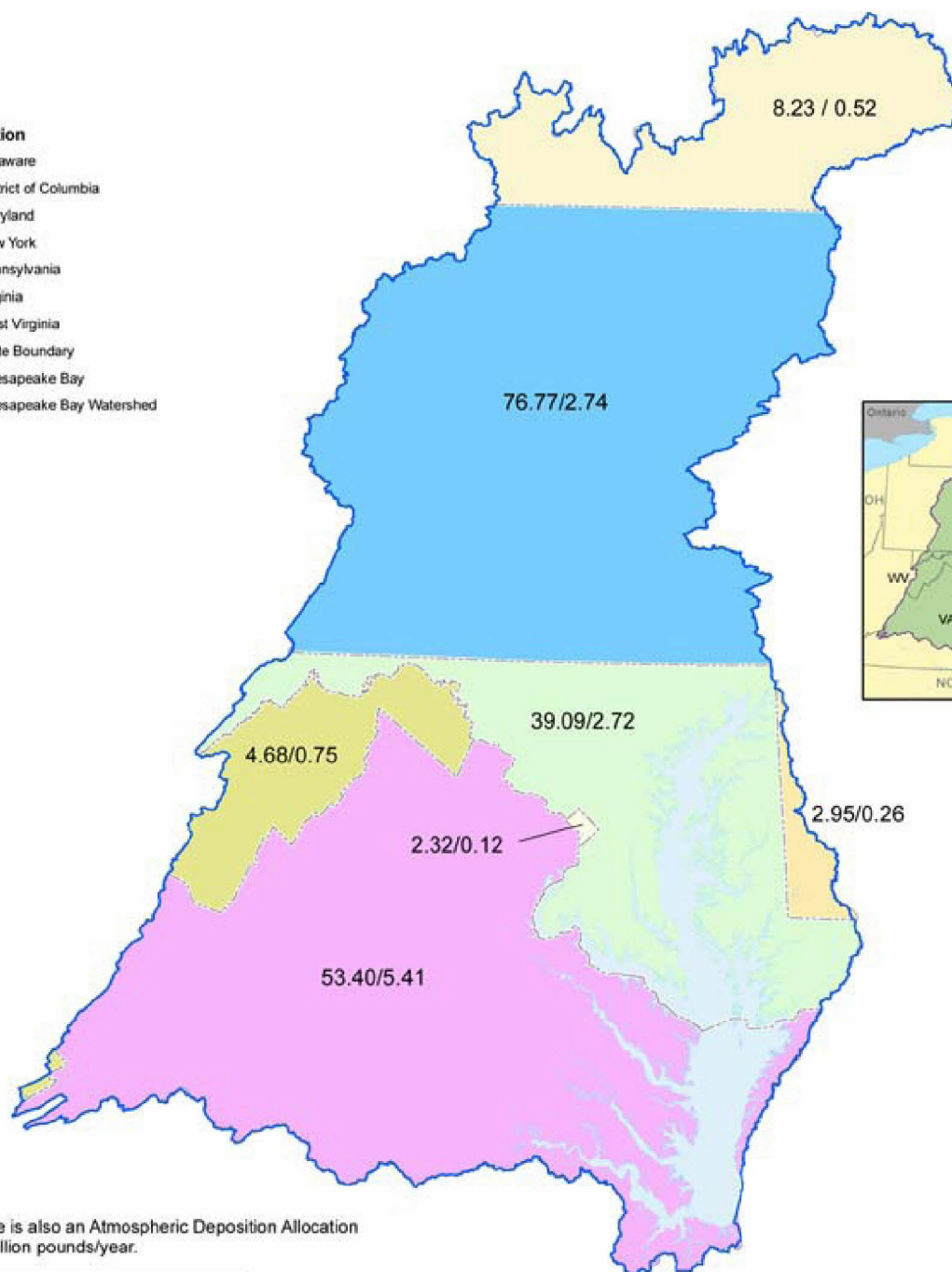
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Pollution Diet by State

Jurisdiction

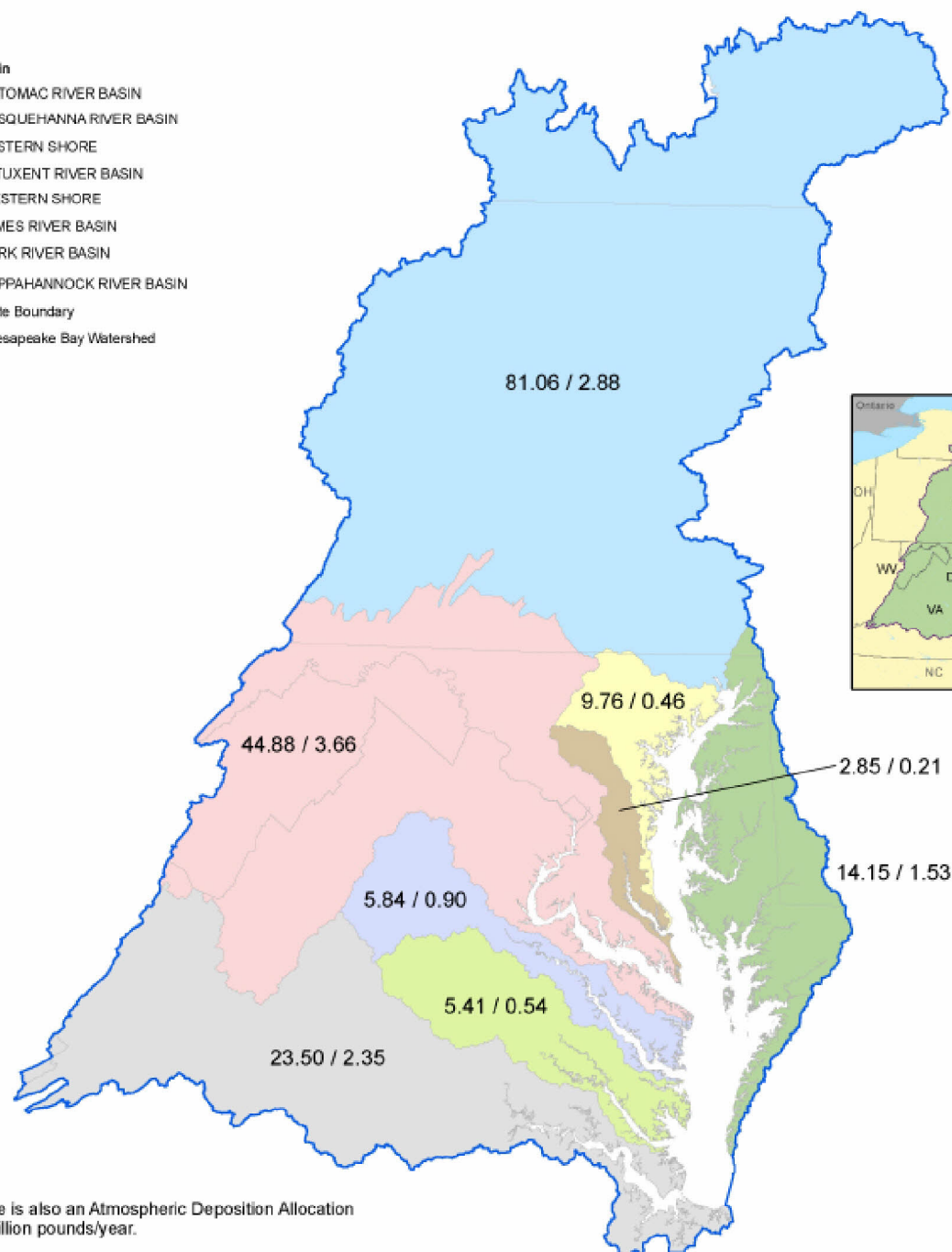
- Delaware
- District of Columbia
- Maryland
- New York
- Pennsylvania
- Virginia
- West Virginia
- State Boundary
- Chesapeake Bay
- Chesapeake Bay Watershed



Pollution Diet by River

Major Basin

- POTOMAC RIVER BASIN
- SUSQUEHANNA RIVER BASIN
- EASTERN SHORE
- PATUXENT RIVER BASIN
- WESTERN SHORE
- JAMES RIVER BASIN
- YORK RIVER BASIN
- RAPPAHANNOCK RIVER BASIN
- State Boundary
- Chesapeake Bay Watershed



TMDL Goals

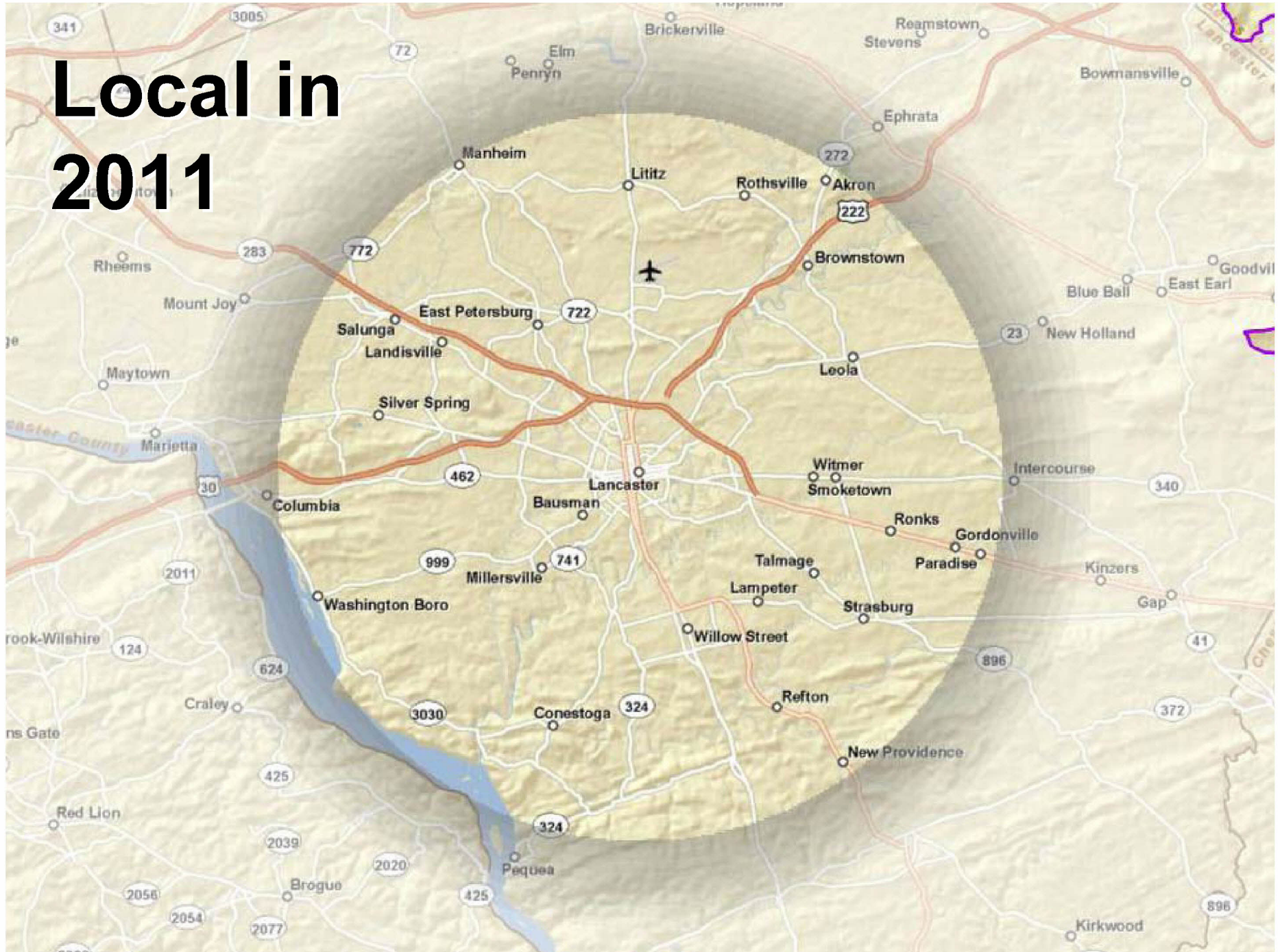
2 year milestones

60 percent by 2017

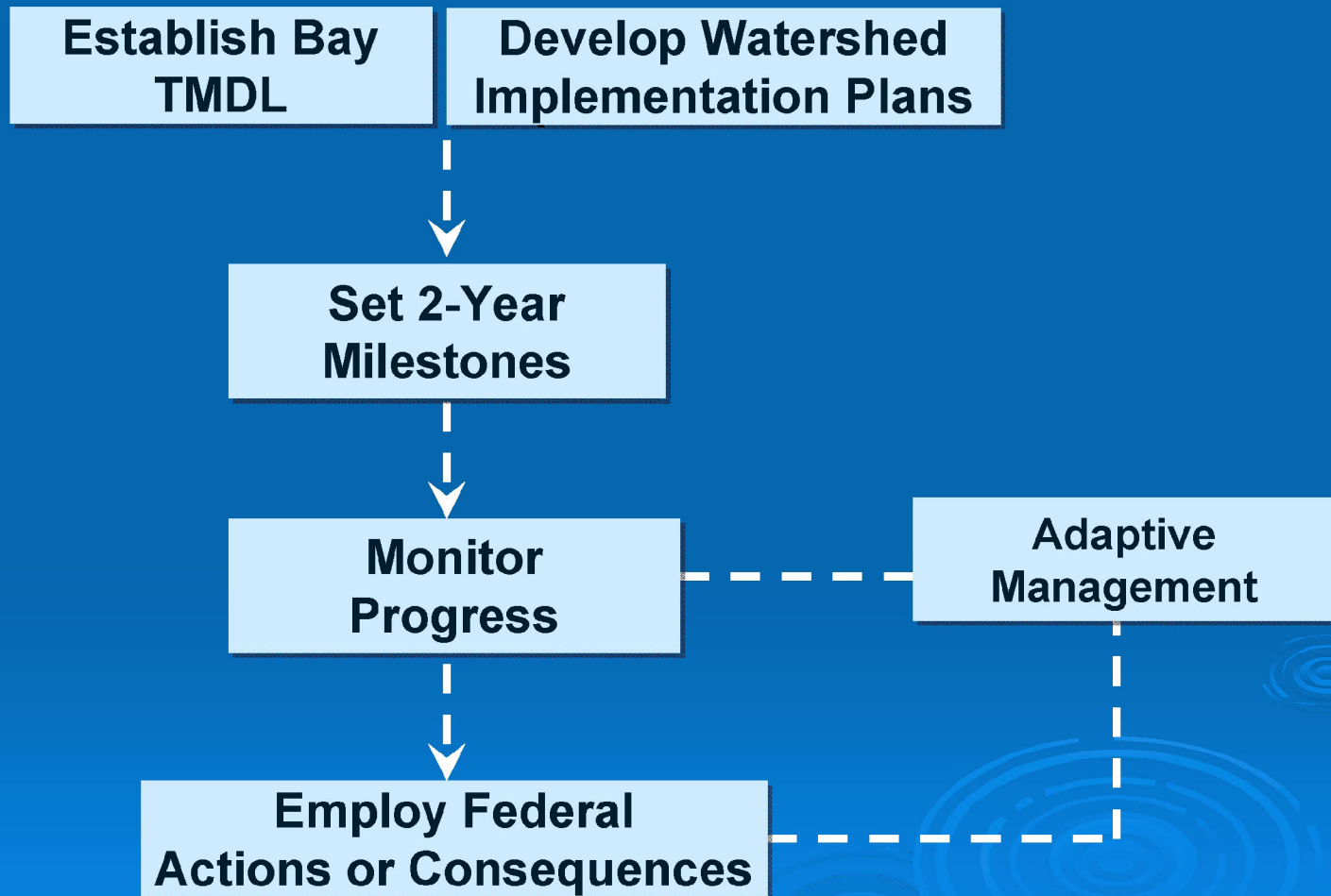
100 percent by 2025

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Local in 2011



Accountability for Results



Meeting the Pollution Diet

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Watershed Implementation Plan











**The how, when and where
of attaining the TMDL diet**

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Overall Draft WIP Evaluation

- 7 jurisdictions provided Draft WIPs in early September
- WIPs must:
 - achieve pollution targets
 - provide reasonable assurance

Do WIPs meet the allocations?

Jurisdiction	Nitrogen	Phosphorus	Sediment
DC			
DE			
MD			
NY			
PA			
VA			
WV			

Draft Pennsylvania WIP Evaluation

- Met nitrogen allocation
- Did not meet phosphorus (11 percent **over**)
- Did not meet sediment (1 percent **over**)

Overall Draft WIP Evaluation

None of the WIPs provided adequate assurance

- Inadequate strategy for filling program gaps
- Limited enforceability/accountability
- Few dates for key actions

Federal Backstops

- All jurisdictions require some level of backstop to:
 - Meet the pollution allocations
 - Provide a high level of assurance
- Backstop allocations focus on federal authority
 - Additional reductions from regulated point sources (wastewater treatment plants, CAFO, MS4s)
 - Finer scale allocations for headwater states

Federal Backstops

➤ Backstop allocation adjustments

- **Minor** - adjust load allocations to equal targets
- **Moderate** -
 - Stronger CAFO/MS4 requirements
 - Significant WWTPs: N @ 4 mg/l, P @ 0.3 mg/l
- **High Backstop** –
 - Stronger CAFO/MS4 requirements
 - Significant WWTPs: N @ 3 mg/l, P @ 0.1 mg/l

Backstops by Jurisdiction

- Maryland, DC – Minor Backstop
- Virginia – Moderate Backstop
- Delaware, Pennsylvania, New York and West Virginia – High Backstop

Draft Pennsylvania WIP Evaluation

For Pennsylvania: **high backstop**

➤ Insufficient detail:

- Quantifying gap-filling strategies
- MS4 boundary
- Attributes of offset and trading program
- Significant reductions for forest and septics

Draft Pennsylvania WIP Evaluation

For Pennsylvania: **high backstop**

- Wastewater facilities: limit of technology (3 mg/L TN and .1 mg/L TP) and design flow
- MS4s: 50% of urban MS4 lands meet aggressive performance standard through retrofit/redevelopment; 25% of unregulated land treated as regulated
- CAFO standards apply to AFOs, EXCEPT no feed management on dairies; designation as necessary
- Load from point source reductions redistributed to forest, septic, and agriculture sources

In Summary

- Hybrid TMDL is blend of jurisdiction WIPs and EPA backstop allocations
- Final WIPs need to address deficiencies
- EPA prefers to use jurisdiction WIPs and not backstop in final TMDL

Opportunities for Improvement

- Jurisdictions can enhance their WIP submissions by the November 29 deadline
 - EPA will engage jurisdictions in discussions
 - EPA will evaluate the final WIPs
 - Final TMDL will be informed by final WIPs

Next Steps

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Next Steps

- Hold 18 public meetings in six states, D.C.
- Public comment period until November 8
- States, D.C. submit final WIPs on November 29
- TMDL will be established by December 31

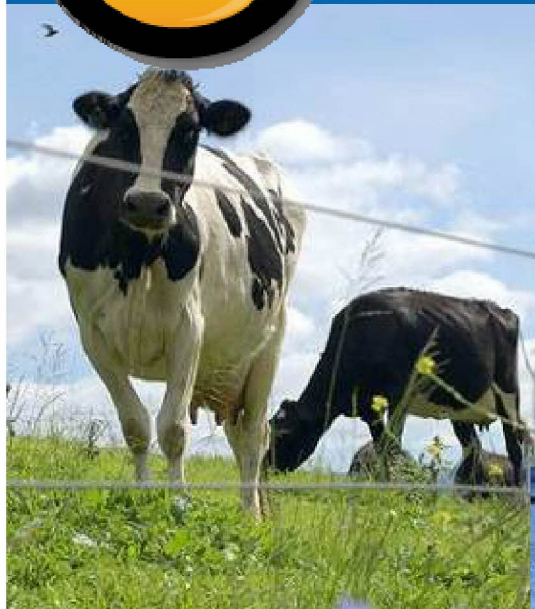
Submit Your Comments

- Public comment period until **November 8**
 - **Electronically**, visit:
www.regulations.gov
Docket ID No. EPA-R03-OW-2010-0736
 - **In writing**, mail to:
Water Docket, EPA, Mailcode: 2822T
1200 Pennsylvania Ave., NW.,
Washington, D.C., 20460.
 - **By hand**, drop off from 8:30 a.m. - 4:30 p.m.:
EPA Docket Center Public Reading Room,
EPA Headquarters West, Room 3340,
1301 Constitution Ave., NW, Washington, D.C.

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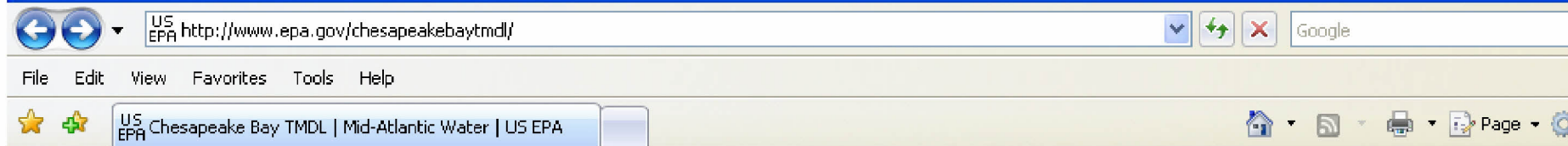
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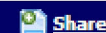
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Review and Comment on the Draft TMDL

The PDF links on this page can be viewed with the Adobe PDF reader. [About PDF](#)

EPA will establish and oversee achievement of a strict "pollution diet" known as a Total Maximum Daily Load, or TMDL, that will drive actions to clean local waters and the Chesapeake Bay. [Read more...](#)

National Information

- [Executive Order Website](#)
- [Federal Register Notice](#)

What's Happening

The six watershed states and the District of Columbia have submitted draft Phase 1 Watershed Implementation Plans (WIPs).

View [Delaware](#), [District of Columbia](#), [Maryland](#), [New York](#), [Pennsylvania](#), [Virginia](#) and [West Virginia](#)

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